

10/532880

JC14 Rec'd PCT/PTO 28 APR 2005
PCT/IT03/00703

25

NEW CLAIMS

1. Distributed system (10) suitable for issuing printed objects (25), comprising:

a central control unit (12);

5 a plurality of local terminals (11) distributed throughout the land and suitable for issuing said printed objects (25), said central unit (12) being suitable for controlling said local terminals (11) through a communication and control network (15, 15a);

10 a plurality of smart cards (21) assigned to the operators of said local terminals (11), said smart cards (21) being provided for being used by said operators to activate and enable said local terminals (11) to issue said printed objects (25); and

an initialisation programme (40) associated with said central unit (12), with said local terminals (11) and with said smart cards (21);

15 wherein said initialisation programme (40) is such as to initialise in combination, during an initialisation stage, a given local terminal (11) and a given smart card (21), so as to establish between said given terminal (11) and said given smart card (21) a bi-unequivocal relationship of correspondence and cooperation, such that, following said initialisation
20 stage, said given smart card (21) is enabled to be used on and to cooperate solely with the corresponding said given terminal (11), and in turn said given local terminal is enabled for issuing said printed objects (25) solely after

BEST AVAILABLE COPY

PCT/IT03/00703

26

having recognized said given smart card (21), in combination with which it was initialised.

2. System according to claim 1, wherein said initialisation programme is provided for being executed following the insertion of said given smart card

5 In the corresponding given terminal, and for activating the following steps:

- recording in a given string an "in the clear" code (24a) and an invisible or protected code (24b) relative to said given local terminal (11) so as to obtain information or a fingerprint defined unequivocally by said local terminal (11); and

10 - signing said fingerprint of said given local terminal with a secret key (35a) present on said given smart card (21), so as to generate a signed fingerprint to be sent to said central unit (12).

3. System according to claim 2, wherein the execution of said initialisation programme (40) is preceded by a customisation step, the purpose of which is to associate and customize said given smart card (21) with a given account (16a) provided within the framework of said system (10).

15 4. System according to claim 2, wherein the execution of said initialisation programme (40) is subordinated to the recording in a memory (24) of said given local terminal (11) of said "in the clear" code (24a) and of said protected code (24b).

20 5. System according to claim 2, wherein the execution of said initialisation programme (40) determines the recording of said given smart

PCT/IT03/00703

27

card (21) on said central control unit (12) and its enablement within the framework of said system (10), in association with said given local terminal (11) with which said given smart card (21) has been initialised.

6. System according to claim 2, wherein said initialisation programme
5 (40) is further provided for activating the following step:

- modifying a given data string (35d) recorded on said given smart card and normally employed for defining a personal identification code (PIN) of the holder of said smart card, so as to inhibit the availability of said personal identification code (PIN) to the user of said smart card.

10 7. System according to claim 2, wherein said initialisation programme executes the signature of the fingerprint of said given local terminal by using a so-called double, asymmetrical key algorithm.

8. System according to claim 1, wherein said initialisation programme
15 (40) is installed on each of the local terminals of said system and constitutes a machine programme true and proper, protected and non-modifiable, for each local terminal (11).

9. System according to claim 1, wherein the execution of said
20 initialisation programme (40) is proposed by the system (10) in response to the insertion of a smart card not yet initialised in a respective local target terminal.

10. System according to claim 1 wherein said printed objects (25) consist of postage stamps and/or revenue stamps and/or stamped titles and/or labels and/or similar prints.

11. System according to claim 1 wherein said given local terminal (11) and the corresponding given smart card (21) are provided for controlling autonomously, without the intervention of said central unit, the execution of local operations concerning the issuing of said printed objects, and wherein
5 said given local terminal is provided for periodically transferring to said central unit data inherent in said local operations.

12. Method for presetting and initialising a smart card (21) within a distributed system (10) suitable for issuing printed objects (25), said smart card having a given data string (35d) generally provided for defining a
10 personal identification code (PIN) of the holder of said smart card, said method comprising the following steps:

- customising in advance (41) said smart card (21) in order to associate it with a bank account (16a) integrated in said system;

- inserting (42) said customized smart card (21) in a given terminal
15 (11) belonging to said system (10);

- modifying (46) said given data string (35d) in such a way as to render it unavailable to the holder of said smart card (21) and therefore inhibit the use of said personal identification code; and

- using said given string, thus modified, in order to unequivocally associate
20 the smart card (21) with the given terminal (11) in which it has been inserted, so as to preset said smart card (21) for enabling only said given terminal (11), and conversely enable said given terminal (11) for issuing the printed object (25) only after having recognized said preset smart card (21).

13. Smart card (21) preset for being used within a distributed system (10) suitable for issuing printed objects (25) and comprising a plurality of local terminal (11) for serving a plurality of respective users, said smart card (21) containing in recorded form in a memory (35):

5 a first plurality of legible data defining a public key (35b) of said smart card (21);

a second plurality of embedded data defining a secret key (35a) of said smart card (21); and

10 a given modified data string defining information unavailable to the user of said smart card,

wherein said modified data string is obtained, during an initialisation stage of said smart card (21), by modifying the original information of a given string (35d) of said smart card, normally provided for defining a personal identification code (PIN) for the user of the smart card,

15 in such a way as to inhibit said personal identification code (PIN) and render the information defined by said given string (35d) no longer available on the outside to the user of said smart card (21) but solely available on the inside of said system (10), and

20 wherein the information defined by said modified data string is such as to unequivocally associate said smart card (21) with one corresponding given terminal (11) of said system, so as to allow use of said smart card (21) only for issuing printed objects (25) from said corresponding

30

PCT/IT03/00703

given terminal (11) and thereby avoid use of said smart card (21) on any other terminal of the system.

14. Local terminal (11) preset for operating within a more general system (10) including a plurality of other terminals and suitable for issuing printed

5 objects (25), comprising:

a memory (24) containing, in recorded form, a first in the clear code

(24a), corresponding to the serial number of said local terminal (11), and

a second invisible code (24b), generated at the time of manufacture of said local terminal (11); and

10 an initialisation programme (40), preloaded in said local terminal, for initialising, during an initialisation stage, said local terminal (11) in combination with a given smart card (21) intended for cooperating in future uniquely with said local terminal (11),

wherein said initialisation programme (40) is such as, during said
15 initialisation stage, to :

combine and record in a given string said first (24a) and said second code (24b), in such a way as to obtain information or a fingerprint suitable for unequivocally identifying said local terminal (11),

sign said fingerprint with a secret key of said given smart card (21)
20 inserted in said local terminal (11), so as to generate a signed fingerprint signed by said given smart card (21) and capable of defining a bi-unequivocal relationship of correspondence and cooperation between said local terminal (11) and said given smart card (21), such that, following said

PCT/IT03/00703

31

initialisation stage, said local terminal (11) is enabled for issuing printed objects (25) solely after having recognized said given smart card (21) initialised on said local terminal (11), and

send said signed fingerprint to a service centre of said more general
5 system of which said local terminal (11) is a part.

15. Postal franking system (10), comprising:

a central control unit (12);

a plurality of local terminals (11) suitable for issuing franking
elements (25), such as in particular postage stamps and/or labels and/or
10 similar prints, for application on postal objects to be delivered by post;

a plurality of smart cards (21) assigned to the operators of said local
terminals, said smart cards being provided for cooperating with said local
terminals (11) in order to identify the respective operator and enable said
terminals to issue said franking elements (25);

15 a communication network (15) for the communication and exchange
of data between said central unit and said local terminals, in order to permit
said local terminals (11) to be controlled by said central unit (12); and

an initialisation programme (40) associated with said central unit,
(12) with said local terminals (11) and with said smart cards (21);

20 wherein said initialisation programme (40) is provided for initialising,
in combination, a given smart card (21) and a corresponding given terminal
(11) during a preliminary initialisation procedure,

and wherein said given smart card (21) and said corresponding given terminal (11), once initialised, establish a bi-univocal type correspondence relationship, such that, subsequent to said preliminary initialisation step, said given local terminal (11) is enabled to issue said franking elements
5 (25), solely after having recognized said corresponding given smart card (21), and conversely said given smart card (21) is suitable for being used by the respective operator for enabling only said corresponding given terminal (11).

16. System according to claim 15, wherein said franking elements are
10 defined by respective amounts in turn determined by the tariffs for delivery of the corresponding postal items, and wherein each of said local terminals is associated, within the framework of said franking system, with a top-up account suitable for containing an overall sum of money destined to diminish progressively in function of the amounts of the franking elements
15 issued by the local terminal.

17. Method for issuing printed objects (25), comprising:
providing a central control unit (12);
providing a plurality of local terminals (11) distributed throughout the land and suitable for issuing said printed objects (25), said central unit (12)
20 being suitable for controlling said local terminals (11) through a communication and control network (15, 15a);
providing a plurality of smart cards (21) assigned to the operators of said local terminals (11), said smart cards (21) being provided for being

PCT/IT03/00703

33

used by said operators to activate and enable said local terminals (11) to issue said printed objects (25);

initialising in combination a given local terminal (11) of said plurality of local terminals and a given smart card (21) of said plurality of smart
5 cards; and

establishing, during said initialising step, a bi-unequivocal relationship of correspondence and cooperation between said given terminal (11) and said initialized given smart card (21), including:

- enabling said initialized given smart card (21) for use on and
10 cooperation solely with the corresponding given terminal (11) in combination with which it was initialised, and
- enabling said given local terminal to issue said printed objects (25) solely after having recognized said initialized given smart card (21).

15

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☒ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.